

INTERNATIONAL SEARCH REPORT

Int'l Application No
PCT/ZA2004/000080

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F42D1/055

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F42D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 846 066 A (BEATTIE TIMOTHY A ET AL) 11 July 1989 (1989-07-11) column 1, lines 49-61 column 2, lines 43-63 column 3, lines 11-45; figure 2	1-4, 6, 12, 14, 17
A	EP 0 301 848 A (EXPLOSIVES TECH ETI) 1 February 1989 (1989-02-01) page 11, lines 38-60	8-11
A	US 4 489 655 A (MOLNAR OTTO) 25 December 1984 (1984-12-25) column 2, lines 10-66; figure 1	1-17
A	EP 0 251 824 A (GEN MINING UNION CORP) 7 January 1988 (1988-01-07) column 4, lines 1-31; figure 1	1-7, 12-17

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

1 December 2004

Date of mailing of the international search report

05/01/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Ziegler, H-J

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4846066	A	11-07-1989	AU 595916 B2	12-04-1990
			AU 7675387 A	03-03-1988
			MW 6387 A1	11-05-1988
			ZA 8706004 A	27-04-1988
			ZW 15187 A1	22-03-1989
EP 0301848	A	01-02-1989	AU 1925588 A	02-02-1989
			CA 1328914 C	26-04-1994
			EP 0301848 A2	01-02-1989
			FI 883547 A	01-02-1989
			JP 1107100 A	24-04-1989
			NO 883394 A	01-02-1989
			US 5014622 A	14-05-1991
			ZA 8805267 A	27-06-1990
US 4489655	A	25-12-1984	NONE	
EP 0251824	A	07-01-1988	AT 58013 T	15-11-1990
			AU 596850 B2	17-05-1990
			AU 7520287 A	07-01-1988
			BR 8703397 A	22-03-1988
			DE 3765860 D1	06-12-1990
			EP 0251824 A1	07-01-1988
			US 4796531 A	10-01-1989
			ZA 8704755 A	24-02-1988
			ZW 12287 A1	30-09-1987